



## SEQUENCE LISTING

&lt;110&gt; Chakravarti, Shukti

Case Western Reserve University

&lt;120&gt; Gene Expression Profiling of Inflammatory Bowel Disease

&lt;130&gt; 021825-004710US

&lt;140&gt; US 09/694,758

&lt;141&gt; 2000-10-23

&lt;150&gt; US 60/160,835

&lt;151&gt; 1999-10-21

&lt;160&gt; 145

&lt;170&gt; PatentIn Ver. 2.1

&lt;210&gt; 1

&lt;211&gt; 1560

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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<223> monocyte-derived neutrophil chemotactic factor  
(MDNCF); interleukin 8 (IL-8) precursor; small  
inducible cytokine, subfamily B, member 8 (SCYB8);  
chemokine (C-X-C motif) ligand 8 (CXCL8)

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chemokine (C-X-C motif) ligand 8 (CXCL8)  
  
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protein ACT-2 precursor; secreted protein G-26

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chemokine (C-C motif) ligand 4 (CCL4); activation  
protein ACT-2 precursor; secreted protein G-26

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<210> 13  
 <211> 2376  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> hepatoma-derived growth factor (HDGF);  
 high-mobility group protein 1-like 2 (HMG-1L2)

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 ctcggggccgg gggccaccat cgaggcgggg gcccgcgcag gcccggagcg gagcggcgc 240  
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<210> 14  
<211> 534  
<212> DNA  
<213> Homo sapiens

<220>  
<223> neutrophil lipocalin (HNL); lipocalin 2 (LCN2);  
human neutrophil gelatinase-associated lipocalin  
(Hngal, NGAL); oncogene 24p3; 25 kDa  
alpha-2-microglobulin-related subunit of MMP-9

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<210> 15  
<211> 5869  
<212> DNA  
<213> Homo sapiens

<220>  
<223> neutrophil lipocalin (HNL); lipocalin 2 (LCN2);  
human neutrophil gelatinase-associated lipocalin  
(Hngal, NGAL); oncogene 24p3; 25 kDa  
alpha-2-microglobulin-related subunit of MMP-9

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 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> nitric oxide synthase (NOS2); inducible nitric  
 oxide synthase (INOS)

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<210> 17  
 <211> 6004  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> mitochondrial superoxide dismutase (SOD2);  
 manganese-containing superoxide dismutase  
 (mangano-superoxide dismutase, MnSOD);  
 indophenoloxidase B (IPO-B)

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 <221> modified\_base  
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 <223> n = g, a, c or t

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<210> 18  
 <211> 854  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> phospholipase A2, group IIIA (PLA2G2A); rheumatoid  
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 PLA2); phosphatidylcholine 2-acylhydrolase;  
 non-pancreatic secretory phospholipase A2 (NPS-PLA2)

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<213> Homo sapiens

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 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> lysozyme (LYZ, LZM) precursor

<400> 21

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 <211> 1971  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> cytochrome P-450, family 3, subfamily A, polypeptide 7  
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 microsomal monooxygenase; flavoprotein-linked monooxygenase;  
 xenobiotic monooxygenase

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 <212> DNA  
 <213> Homo sapiens

<220>  
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 non-selenium glutathione peroxidase (NSGPx);  
 KIAA0106

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 <223> metallothionein

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 <212> DNA  
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 <223> metallothionein-IG (MT1G)

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<210> 26  
 <211> 3411  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> regenerating islet-derived 1 beta (REG1B) precursor;  
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 precursor; secretory pancreatic stone protein 2;  
 pancreatic thread protein (PTP)

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Reg III-alpha) precursor; hepatocarcinoma-intestine-pancreas  
(HIP); proliferation-inducing protein 34 (PIG34)  
  
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 CAAATAAAGT CTCTTCTCC AAGCT 565

<210> 32  
 <211> 952  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> nicotinamide N-methyltransferase (NNMT)

<400> 32  
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 GAAAAAATATT ACAAGTTGG TTCTAGGCAC TCTGAGAAA GCCAGATTCT TAAGCACCTT 240  
 CTGAAAAAATC TTTCAAGAT ATTCTGCCTA GACGGTGTGA AGGGAGACCT GCTGATTGAC 300  
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gtcgtcactg actactcaga ccagaacctg caggagctgg agaagtggct gaagaaaagag 420  
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<210> 33  
 <211> 4466  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> lymphocyte G0/G1 switch regulatory protein 2  
 (GOS2)

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<210> 34  
<211> 439  
<212> DNA  
<213> Homo sapiens

<220>  
<223> S100 calcium-binding protein P (S100P);  
migration-inducing gene 9

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aatgctttagt aaaaaaaaaa 439

<210> 35  
 <211> 565  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> annexin V, annexin 5, annexin A5 (ANX5, ANXA5); lipocortin V; endonexin II; anchorin CII; placental anticoagulant protein I (PAP-I); vascular anticoagulant-alpha (VAC-alpha); calphobindin; anticoagulant protein 4

<400> 35  
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<210> 36  
 <211> 3678  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> hypoxia-inducible factor 1 alpha (HIF1A, HIF-1 alpha); basic-helix-loop-helix-PAS protein MOP1; ARNT interacting protein

<400> 36  
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<210> 37  
<211> 1910  
<212> DNA  
<213> *Homo sapiens*

<220>  
<223> nuclear factor of interleukin 6 (NF-IL6);  
interleukin 6-dependent DNA-binding protein;  
transcription factor 5

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<220>
<221> modified_base
<222> (1)..(1910)
<223> n = q, a, c or t
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<210> 38  
 <211> 774  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> suppressor of mif two 3 homolog 2 (SMT3H2, HSMT3)  
 precursor; MIF2 suppressor; small  
 ubiquitin-related modifier 2 (SUMO2); sentrin 2

<220>  
 <221> modified\_base  
 <222> (1)..(774)  
 <223> n = g, a, c or t

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 aaaatacccc ctttctccc attagtggnc atgctccatt cagccctaa acctttataa 720  
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<210> 39  
 <211> 2841  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <223> SWI/SNF related, matrix-associated, actin dependent regulator  
 of chromatin, subfamily d, member 1 (SMARCD1); SWI/SNF complex  
 60 kDa subunit A; chromatin remodeling complex BRG-1/Brm  
 associated factor 60A (BAF60A); Swp73-like protein  
  
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 (intestinal) (KLF5, IKLF); similar to colon  
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 (GNAS1, Gs alpha); secretogranin VI

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 g 1381

<210> 47  
 <211> 952  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> sorcin CP-22 (SRI); calcium binding protein  
 amplified in multidrug-resistant cells

<400> 47

gcagtctgca gcatggcgta cccggggcat cctggcgccg gcggcggtt ctaccaggc 60  
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 gttactttt ctgctgttagc tggacaggat gggcagatag atgctgtatga attgcagaga 180  
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 agctgttgcataa aagtttattt ctggatgtac aactgaagtt ttgttttagt ttgtataata 780  
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<210> 48  
 <211> 1360  
 <212> DNA  
 <213> Homo sapiens

<220>  
<223> creatine kinase, brain, creatine kinase-B (CKB,  
B-CK, CKBB)

<400> 48

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<210> 49  
<211> 927  
<212> DNA  
<213> Homo sapiens

<220>

<223> epithelial protein up-regulated in carcinoma  
(DD96); membrane associated protein 17 (MAP17);  
PDZK1 interacting protein 1 (PDZK1IP1)

<400> 49

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<210> 50  
 <211> 595  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> calgizzarin; S100 calcium binding protein A11  
 (S100A11); protein S100C; MLN 70

<400> 50  
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 cagcctttct gtcatcatct ccacagccca cccatccccct gaggcacacta accacctcat 540  
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<210> 51  
 <211> 1433  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> down-regulated in rhabdomyosarcoma LIM protein  
 (DRAL); four and a half LIM domains protein 2  
 (FHL-2); skeletal muscle LIM-protein 3 (SLIM 3);  
 aging associated gene 11 (AAG11)

<400> 51  
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<210> 52
<211> 2416
<212> DNA
<213> Homo sapiens

<220>
<223> MAX interacting protein 1 (MXI1); MAX interactor 1
      tumor suppressor; Max-related transcription
      factor; MAX dimerization protein 2

<400> 52
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ttcccttttt ttttttttt tttaagtaat taaggtagt taaattttt aaagtataca 120
aagtccaaac agccagggtt aaggtctcca agaggcctt ccaggtaag ggagtgcga 180
gaggccccgg tcgcaccccg cggtgccat ggagcgggtg aagatgatca acgtgcagcg 240
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<210> 53
<211> 2881
<212> DNA
<213> Homo sapiens

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<220>

<223> colon mucosa-associated down-regulated in adenoma (DRA); solute carrier family 26, member 3 (SLC26A3); chloride anion exchanger; congenital chloride diarrhea

<400> 53

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<210> 54  
 <211> 1104  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> MHC class II HLA-DP light chain

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 cacatctgtg gtccaaaggca gggccactcc agagaattac gtgcaccagt tacggcagga 180  
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<210> 55  
 <211> 282  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> MHC class II HLA-DR beta 1 chain precursor  
 (HLA-DRB4)

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<210> 56  
 <211> 213  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> MHC HLA class II DG; HLA-DR gamma chain; CD74  
 antigen

<400> 56  
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 cgccggcacc ataactgcag tgagtcactg gaa 213

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<210> 57
<211> 1191
<212> DNA
<213> Homo sapiens

<220>
<223> MHC HLA class II DR beta-1 chain (HLA-DRB1)

<400> 57
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<210> 58
<211> 5724
<212> DNA
<213> Homo sapiens

<220>
<223> MHC HLA class II DR alpha heavy chain (HLA-DRA)

<400> 58
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<210> 59  
<211> 1100  
<212> DNA  
<213> *Homo sapiens*

<220>  
<223> MHC HLA class II DM alpha chain-like (HLA-DMA);  
RING6

<400> 59  
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<210> 60  
<211> 1763  
<212> DNA  
<213> *Homo sapiens*

<220>  
<223> MHC HLA class II DR2-Dw12 DQw1-beta chain  
(HLA-DRB2; HLA-Dw12)

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 <211> 1216  
 <212> DNA  
 <213> Homo sapiens  
  
 <220>  
 <223> MHC HLA class II DQw1.1 beta chain (HLA-DQB1)  
 precursor

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<210> 62
<211> 915
<212> DNA
<213> Homo sapiens

<220>
<223> rearranged immunoglobulin lambda light chain (Ig
lambda)

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<210> 63
<211> 527
<212> DNA
<213> Homo sapiens

<220>
<223> immunoglobulin heavy chain (IgH), VDJRC region

<400> 63
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<210> 64
<211> 382
<212> DNA
<213> Homo sapiens

<220>
<223> immunoglobulin lambda-like protein (IGLL2)

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<211> 1244  
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<213> Homo sapiens

<220>  
<223> immunoglobulin rearranged gamma chain, V-J-C region

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<212> DNA  
<213> Homo sapiens

<220>  
<223> immunoglobulin rearraged kappa light chain,  
variable region

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<220>
<223> MHC HLA class II Ia-associated invariant gamma
      chain; CD74 antigen

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<210> 68
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<223> omega light chain protein 14.1, immunoglobulin
      lambda chain-like

<400> 68
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<210> 69
<211> 2919
<212> DNA
<213> Homo sapiens

<220>
<223> polymeric immunoglobulin receptor (poly-Ig
      receptor, PIGR) precursor; hepatocellular
      carcinoma-associated protein TB6; transmembrane
      secretory component (SC)

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 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> immunoglobulin alpha heavy chain allotype 2  
 constant region; IgA2 H chain C region (IGHA2)

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<212> DNA  
<213> Homo sapiens

<220>  
<223> T-cell specific protein; T-cell receptor  
beta-chain

<400> 71  
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<210> 72
<211> 1032
<212> DNA
<213> Homo sapiens

<220>
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      lysosomal thiol reductase (GILT)

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<210> 73
<211> 2709
<212> DNA
<213> Homo sapiens

<220>
<223> interferon-gamma induced protein 16 (IFI16);
      interferon-inducible myeloid differentiation
      transcriptional activator

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<212> DNA  
<213> *Homo sapiens*

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ubiquitin-like modifier; ubiquitin cross-reactive protein  
(UCRP) precursor; interferon alpha-inducible protein  
(IFI-15K); interferon-induced 17 kDa protein precursor

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<213> Homo sapiens  
  
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hIL-2R $\gamma$ ) precursor; cytokine receptor common gamma  
chain (gamma-C) precursor; CD132 antigen; p64  
  
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<212> DNA  
<213> Homo sapiens  
  
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<223> complement factor D (DF) precursor; adipasin; C3  
convertase activator; properdin factor D

<400> 77

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<211> 1192  
<212> DNA  
<213> Homo sapiens

<220>  
<223> CD9 antigen; leukocyte antigen MIC3;  
motility-related protein-1 (MRP-1); tetraspanin-29  
(Tspan-29)

<400> 78

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<211> 2880  
<212> DNA  
<213> Homo sapiens

<220>

<223> defensin 5 (DEF5) preproprotein; defensin alpha 5  
(DEFA5); paneth cell-specific alpha-defensin 5

<400> 79

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<210> 80

<211> 3060

<212> DNA

<213> Homo sapiens

<220>

<223> defensin 6 (DEF6, HD-6) preproprotein; defensin alpha 6 (DEFA6) precursor; paneth cell-specific alpha-defensin 6

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<213> Homo sapiens

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      precursor; macrophage elastase (ME)

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 collagenase; tissue collagenase

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 <213> Homo sapiens

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<212> DNA  
<213> Homo sapiens

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<223> collagen, type III, alpha 1 preproprotein;  
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collagen (COL3A1); Ehlers-Danlos syndrome type IV;  
fetal collagen

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<221> modified\_base  
<222> (2509)  
<223> n = g, a, c or t

<400> 89

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 <211> 1585  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> collagen alpha-2(VI) chain precursor; collagen VI  
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 collagen alpha 2 chain precursor (COL6A2)

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<211> 2212  
<212> DNA  
<213> Homo sapiens

<220>  
<223> collagen alpha-2(IV) chain precursor; alpha-2 type  
IV collagen; type IV collagen alpha (2) chain;  
(COL4A2); procollagen; basement membrane collagen

<400> 91

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<210> 92  
 <211> 1830  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> mucin 4; tracheo-bronchial mucin (MUC4)

<400> 92  
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<210> 93  
 <211> 490  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> trefoil factor 1 (TFF1) precursor; gastrointestinal trefoil protein pS2; pS2 protein precursor; protein NR-2/pS2; estrogen-regulated protein pNR-2; breast cancer estrogen inducible sequence (BCE1, BCE I); HP1.A

<400> 93  
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 <211> 229  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> intestinal mucin

<400> 94  
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<210> 95  
 <211> 2133  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> osteonectin precursor; secreted protein, acidic,  
 cysteine rich (SPARC); basement-membrane protein  
 40 (BM-40); extracellular matrix protein BM-40

<400> 95  
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<210> 96  
 <211> 1182  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> proteoglycan 1 (PRG1); hematopoietic proteoglycan core protein;  
 secretory granule proteoglycan core protein precursor;  
 serglycin (SRGN) precursor; proteoglycan secretory granule 1;  
 HL-60 cell proteoglycan peptide core; platelet proteoglycan

<400> 96  
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precursor; osteoblast specific factor 2  
(fasciclin-I-like); periostin (PN, POSTN);  
periodontal ligament-specific periostin

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<212> DNA  
<213> Homo sapiens

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beta adducin 2; rabphilin-3A-interacting protein

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<213> Homo sapiens

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<212> DNA
<213> Homo sapiens

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      cytoskeletal 20; protein IT

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<212> DNA  
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oxyntomodulin (OXY, OXM)

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<213> Homo sapiens
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carrier, family 16, member 1 (SLC16A1)

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<212> DNA  
<213> Homo sapiens
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alpha-ketoglutarate dehydrogenase; oxoglutarate  
(alpha-ketoglutarate) dehydrogenase (lipoamide)

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 aldehyde reductase

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<210> 114  
<211> 1523  
<212> DNA  
<213> Homo sapiens

<220>  
<223> carbonic anhydrase II (CA2, CA II); carbonic anhydrase B; carbonic dehydratase; carbonate dehydratase II

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<211> 655  
<212> DNA  
<213> Homo sapiens

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<210> 116  
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<213> Homo sapiens
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<223> phosphoenolpyruvate carboxykinase 1, soluble  
(PCK1, PEPCK)

<210> 117  
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<212> DNA  
<213> Homo sapiens

<220>  
<223> syntaxin 4A (STX4A, STX4) precursor; syntaxin (placental)

<400> 117

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<212> DNA  
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<220>  
<223> chaperonin subunit 6A (CCT6A); chaperonin containing T-complex protein 1 (TCP1), subunit 6A; chaperonin containing TCP1, zeta 1 (CCT-zeta-1); histidine transport regulator 3 (HTR3); acute morphine dependence related protein 2; TRIC chaperonin subunit

<400> 118

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<212> DNA  
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<223> UDP-glycosyltransferase 1 (UGT1);  
UDP-glycosyltransferase 1 family, polypeptide A6  
(UGT1A6); phenol UDP-glucuronosyltransferase  
(UDPGT); phenol transferase UGT1F; GNT1

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<211> 8447  
<212> DNA  
<213> Homo sapiens

<220>  
<223> sulfotransferase family, cytosolic, 1A, phenol-preferring,  
member 3 (SULT1A3, ST1A3); thermolabile phenol sulfotransferase  
(STM); catecholamine-sulfating phenol sulfotransferase;  
placental estrogen sulfotransferase (EST); aryl sulfotransferase

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 <211> 2191  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> beta-glucuronidase (GUSB) precursor;  
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 glucuronosohydrolase; glucuronohydrolase; beta-G1

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<210> 122
<211> 2090
<212> DNA
<213> Homo sapiens
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<220>  
<223> UDP-glucuronosyltransferase 2 family, protein B15 (UGT2B15,  
UDP-GT) precursor; UDP-glucuronosyltransferase 2B8 (UGT2B8)  
precursor, microsomal (estriol-specific); dihydrotestosterone/  
androstanediol UDP-glucuronosyltransferase isoform 3 (UDPGTh-3)

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<210> 123  
 <211> 1137  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> thiosulfate sulfurtransferase (TST);  
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 cyanide transsulfurase; thiosulfate  
 thiotransferase; rhodanese

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<210> 124  
 <211> 3494  
 <212> DNA  
 <213> Homo sapiens

<220>

<223> aminopeptidase N (ANPEP, PEPN, APN) precursor; membrane alanine aminopeptidase precursor; alanyl (membrane) aminopeptidase; microsomal aminopeptidase; aminopeptidase M; CD13 antigen; p150; IGF1R

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<210> 125  
<211> 1815  
<212> DNA  
<213> Homo sapiens

<220>  
<223> protective protein for beta-galactosidase (PPGB,  
PPR) precursor; beta-galactosidase 2;  
carboxypeptidase C precursor; lysosomal protective  
protein; cathepsin A precursor

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<210> 126  
<211> 584  
<212> DNA  
<213> Homo sapiens

<220>  
 <223> fatty acid binding protein 6 (FABP6); gastropin  
     (GT) isoform 1; ileal lipid-binding protein (ILBP,  
     I<sub>l</sub>lbp); ileal bile acid binding protein (I-BABP);  
     intestinal 15 kDa protein (I-15P)

<400> 126  
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<210> 127  
 <211> 634  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> fatty acid binding protein 4, adipocyte (FABP4);  
     adipocyte lipid-binding protein (ALBP); aP2, p15

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<210> 128  
 <211> 489  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> fatty acid binding protein 1, liver (FABP1, FABP2,  
     L-FABP); fatty acid binding protein, hepatic; Z  
     protein; sterol carrier protein

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<210> 129  
 <211> 882  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> delta3, delta2-CoA-isomerase (DCI);  
 delta(3)-delta(2)-enoyl-CoA isomerase;  
 dodecenoyl-CoA delta-isomerase precursor,  
 mitochondrial; 3,2-trans-enoyl-CoA isomerase

<400> 129  
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 gtgtccagga ggtcttaaac aaggtatccc tcaacttaaa aa 882

<210> 130  
 <211> 1584  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <223> acetyl-CoA acyltransferase 2 (ACAA2);  
 mitochondrial 3-oxoacyl-CoA thiolase;  
 3-ketoacyl-CoA thiolase, mitochondrial;  
 beta-ketothiolase; T1

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<210> 131  
<211> 9127  
<212> DNA  
<213> *Homo sapiens*

<220>  
<223> 3-beta hydroxysteroid dehydrogenase type II (HSD3B2);  
5delta-4delta isomerase; 3-beta isomerase 2; hydroxy-delta-5  
steroid dehydrogenase; steroid delta-isomerase 2; 3beta-hydroxy  
delta5-steroid dehydrogenase multifunctional protein II

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<213> Homo sapiens

<220>  
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<212> DNA  
<213> Homo sapiens

<220>

<223> 11-beta-hydroxysteroid dehydrogenase type II  
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11-beta-dehydrogenase, isozyme 2; NAD-dependent  
11-beta-hydroxysteroid dehydrogenase

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<211> 511

<212> DNA

<213> Homo sapiens

<220>

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<220>

<221> modified\_base

<222> (511)

<223> n = g, a, c or t

<400> 136

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<211> 571  
<212> DNA  
<213> Homo sapiens

<220>  
<223> guanylate cyclase activator 2A (GUCA2A); guanylate cyclase activating protein 1 (Gap-I); guanylin 2, intestinal, heat-stable; guanylin precursor; proguanylin

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<220>  
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<220>

<223> KIAA0035; similar to rat nucleolar phosphoprotein  
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phosphoprotein 1 (NOLC1), nucleolar phosphoprotein  
p130; trans-regulated protein 13; HCV NS5A

<400> 139

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<223> endogenous retrovirus envelope region; pseudo-env;  
PL1

<400> 141

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<223> cytochrome c oxidase subunit Vb, mitochondrial  
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RIB1

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<211> 2000

<212> DNA

<213> Homo sapiens

<220>

<223> K12 protein precursor; secreted and transmembrane  
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<400> 144

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<211> 121

<212> DNA

<213> Homo sapiens

<220>

<223> clone E18 from CpG-enriched DNA

<400> 145

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